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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/551,074

09/27/2005

Anders Bergstrom

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6349

27045

7590

04/15/2008

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EXAMINER

BHATTACHARYA, SAM

ART UNIT

PAPER NUMBER

2617

MAIL DATE

DELIVERY MODE

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/551,074	Applicant(s) BERGSTROM ET AL.	
	Examiner Sam Bhattacharya	Art Unit 2617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 January 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 12-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 12-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 12-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takano et al. (US 7,103,376) in view of Chen (US 2003/0161284).

Regarding claim 12, Takano discloses a method for handover in a communication system, wherein said communication system includes an access network having Radio Network Controllers (RNC), Radio Base Stations (RBS) consisting of main units (MU) which perform base band signal processing, and one or more radio remote units (RRUs) which convert between baseband and radio frequencies and transmits and receives signals over one or more antennas covering cells, and one or several User equipment (UE) moving closer and closer to another cell, which said network is made aware of and then it will initiate a handover process, during which the call will be transferred from one cell to another cell within said radio base station (RBS) or to a cell in another Radio base station (RBS) in said communication network, wherein said handover process interact with a memory containing a list of said radio remote units (RRUs).

See col. 1, line 51 – col. 2, line 22.

Takano fails to disclose the list is a softer handover group of RRUs capable of doing softer handover with each other using the same Rake receiver. However, in an analogous art, Chen teaches this feature in FIGS. 2 and 3, and paragraph 48, lines 1-11. Therefore, it would

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have been obvious to one of ordinary skill in the art at the time the invention was made to modify the method of Takano by incorporating this feature taught in Chen for the purpose of conserving system components and resources.

Regarding claim 13, Takano discloses that said handover process is performed according to a selection from said list and said handover is performed according to the rules: If the new cell is within the said list (Softer handover group) as another cell used by the user equipment (UE or phone), a Softer HO is initiated to the RBS as normal. If the new cell is not within the said list (softer handover group) as another cell used by the user equipment (UE or phone), a Soft handover is initiated in the RNC or RBS. See col. 7, lines 24-31.

Regarding claim 14, Takano discloses that said softer handover in the Radio base station (RBS) is a second stage maximum ratio combining or a selection combining with separate Rake receivers. See col. 7, lines 24-31.

Regarding claim 15, Takano discloses that said selection among the two situations can be done with support from Radio Network controller or locally in said Radio base station (RBS). See col. 7, lines 32-44.

Regarding claim 16, Takano discloses that said list (softer handover group) are made from a user equipment (UE) measured delay. See col. 34-45.

Regarding claim 17, Takano discloses that a reception time difference are used by Radio network controller (RNC) or Radio base station to calculate the relative propagation delay between the new antenna and the user equipment compared to the other active cells. See col. 7, lines 32-44.

Regarding claim 18, Takano discloses that said Radio network controller (RNC) can based on this measurement include the new cell in said list (Softer handover group) or if said Radio network controller (RNC) not is impacted the measurement is forwarded to the Radio base station (RBS) and the RBS makes this decision. See col. 7, lines 34-45.

Regarding claim 19, Takano discloses that artificial delay are stored within said Radio base station (RBS) to accomplish that the two signals from said two antennas are received within the RAKE window so that softer handover can be made. See col. 8, lines 18-43.

Regarding claim 20, Takano discloses that a delay equalisation function makes the digital delay between the receiver/antenna and the RAKE receiver the same for all receivers/antennas. See col. 9, lines 5-23.

Regarding claim 21, Takano discloses that the delay is optimised to maximize the number of successful softer handovers. See col. 9, lines 5-23.

Regarding claim 22, Takano discloses that the delay are determined by evaluating the UE measured delay of a history of successful hand over between the related RRUs. See col. 8, lines 18-43.

Response to Arguments

3. Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sam Bhattacharya whose telephone number is (571) 272-7917. The examiner can normally be reached on Weekdays, 9-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, George Eng can be reached on (571) 272-7495. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

sb

/Sam Bhattacharya/

Examiner, Art Unit 2617